Declassified in Part - Sanitized Copy Approved for Release 2013/12/17 : CIA-RDP82-00457R007800540008-6

CENTRAL INTELLIGENCE AGENCY

INFORMATION REPORT

REPORT

CD NO.

COUNTRY USSR (Moscow Oblast)

DATE DISTR. 10 Aug 51

SUBJECT Moscow Pump Factory imeni Kalinin

NO. OF PAGES 4

PLACE ACQUIRED

NO. OF ENCLS. (LISTED BELOW)

CONFIDENTIAL

50X1-HUM

DATE OF INFO.

SUPPLEMENT TO REPORT NO.

THIS DOCUMENT CONTAINS INFORMATION AFFECTING THE NATIONAL DEFENSE OF THE UNITED STATES WITHIN THE MEANING OF THE ESPIONAGE ACT 50 U.S.C., 31 AND 32, AS AMENDED. ITS TRANSMISSION OR THE REVELATION OF ITS CONTENTS IN ANY MANNER TO AN UNAUTHORIZED PERSON IS PROHIBITED BY LAW. REPRODUCTION OF THIS FORM IS PROHIBITED.

THIS IS UNEVALUATED INFORMATION

History

2. The factory, which existed long before the Revolution, is one of the oldest in Moscow. Before the war the factory belonged to the Chief Directorate of Mining Machine Manufacture of the People's Commissariat for Heavy Industry of the USSR. It produced pumps of various types in large quantities, a few low-powered turbines, and in addition carried out orders for iron castings.

3. In September 1941 a part of the factory was evacuated, and in the remaining part, which was switched over to war production, the equipment and personnel were augmented. During the war the factory manufactured shells for 3-inch guns, shells for 40 mm guns, and bombs for mortars of from 50 to 80 mm caliber. In 1944 the factory began to turn out a comparatively small quantity of metal-cutting machine tools. In 1945, at the end of hostilities, the factory gradually reverted to pre-war production.

Type of Product Manufactured

4. Since the war the factory has been turning out centrifugal pumps. These pumps are chiefly of the single vane impeller (lopastnoye koleso = blade wheel) pattern, but several types are produced with 2, 3, 4, 5, and 6 impellers. The 4-inch 4 NDV and 8-inch 8 NDV pumps with a single impeller (odnokolesnye nasosy = single-wheel pumps) are now being manufactured in large series on the conveyer belt system.

5. Since 1949 production has started of very large pumps such as types 20 NDS and 22 NDS. In addition, in 1949 a special shop was fitted out for producing artesian pumps, which were previously turned out in very small numbers.

6. The pumps are intended chiefly for pumping water, but pumps are also produced for pumping gasoline, paraffin oil, and transformer oil, etc.

7. At the present time the factory specializes in the production of centrifugal and axial pumps of many types and sizes, artesian pumps of a few types,

STATE	X	NAVY	X	NSRB	DISTRIBUTION
ARMY	X	AIR	X	FBI	

50X1-HUM

Document No.
No Change in Class.
Declassified
Class. Changed To: TS S C
Auth: HR 70-2
Date: 9 Aug 78

50X1-HUM

CONFIDENTIAL

50X1-HUM

Declassified in Part - Sanitized Copy Approved for Release 2013/12/17 : CIA-RDP82-00457R007800540008-6

Declassified in Part - Sanitized Copy Approved for Release 2013/12/17 : CIA-RDP82-00457R007800540008-6

suction dredgers, and a few consumer goods.

Details of Production

8. Centrifugal pumps of many types are produced as follows:

a. 4-inch pumps type 4 NDV. Large series production by conveyer belt system. Manufactured in the small-pump shop on the second floor. The conveyer belt system was introduced in 1948 when the factory was completely reorganized. Four versions of this type are turned out, as follows:

Model	Capacity per hr.	Revs. per min.	Number of Vane Impellers	Weight	Kilowatt Rating
1	90 cu m	1450	1	190 kgs	12 kw for a pressure head of 25m
2	130 " "	"	1	"	60 kw for a pressure head of 90m
3	150 " "	"	1	"	" " "
4	180 " "	"	1	"	60 kw for a pressure head of 80m

b. Pumps type 5 NDV. Produced in five versions in the small-pump shop. Small series production. Capacity: 130, 150, 180, 215, 250 cu m per hour. Revolutions: 1,450 rpm. Single impeller. Weight of each pump: 270 kgs. Rating and pressure head in kilowatts and meters respectively: 22-31, 22-29, 22-26, 37-38, 37-22.

c. Pumps type 6 NDV. Produced in five versions in the small-pump shop. Capacity: 215, 250, 300, 325, 260 cu m per hour. Revolutions: 1,450 rpm. Single blade impeller. Weight of each pump: 300 kg. Rating and pressure head in kilowatts and meters respectively: 47-48, 55-54, 55-54, 70-50, 70-47.

d. Pumps type 8 NDV (8 inch). Produced in five versions in the medium-pump shop. Produced in large series by conveyer belt system. Capacity: 400, 500, 540, 600, 720 cu m an hour. Revolutions: 960 rpm. Single blade impeller. Weight of each pump: 1,000 kgs. Combinations of rating and pressure head in kilowatts and meters as follows:

1st version 55-32, 55-36, 70-42
2nd version 56-29, 75-39
3rd version 160-74, 195-94
4th version 80-35
5th version 180-68, 22-78

e. Pumps type 6 NDS. Produced in the small-pump shop. Four versions. Capacity: 215, 250, 300, 330 cu m per hour. Revolutions: 2,950 rpm. Single blade impeller. Weight of each pump: 280 kgs. Rating and pressure head in kilowatts and meters as follows:

1st version 60-68
2nd version 60-64, 79-75
3rd version 79-70
4th version 79-65

f. Pumps type 12 NDS. Produced in small series in the medium-pump shop. Seven versions. Capacity: 650, 720, 800, 900, 1,000, 1,080, 1,260 cu m per hour. Revolutions: 1,450 rpm. Single impeller. Weight of each pump: 1,400 kgs. Rating and pressure head in kilowatts and meters as follows:

Declassified in Part - Sanitized Copy Approved for Release 2013/12/17 : CIA-RDP82-00457R007800540008-6

Declassified in Part - Sanitized Copy Approved for Release 2013/12/17 : CIA-RDP82-00457R007800540008-6

1st version 75-30
2nd version 65-25
3rd version 80-28
4th version 55-21, 75-22, 160-51, 190-60, 225-70
5th version 85-24
6th version 190-48, 225-58, 260-68
7th version 190-44, 225-54, 270-64

g. Pumps type 14 NDS. Produced in small series in the medium-pump shop. Five versions. Capacity: 900, 1,080, 1,260, 1,620, 1,800 cu meters per hour. Revolutions: pump with a capacity of 900 cu m per hour, 960 rpm; remainder 1,450 rpm. Single impeller. Weight: over two tons (first version 2,050 kgs). First version: Rating and pressure head in kilowatts and meters: 10-32, 10-33, 115-37, 140-42.

h. Pumps type 20 NDS. Produced in small series in the large-pump shop. Capacity: 3,600 cu m per hour (1000 liters a second). Revolutions: 960 rpm. Pressure head: 70 m. The pump has one two-bladed impeller (dvukhpotochnoye koleso).

i. Pumps type 22 NDS. Small series production, or more accurately, individual orders, produced in the large-pump shop.

j. Multiwheeled pumps of light weight, of several types, as follows:

1) Capacity: 36 cu m per hour. 1,450 rpm. 4 impellers. Weight: 325 kgs. Rating: about 9 kw with a pressure head of 33 m.

2) Capacity: 36 cu m per hour. 1,450 rpm. 6 impellers. Weight: 400 kgs. Rating: 13 kw with a pressure head of 50 m.

3) Capacity: 54 cu m per hour. 1,450 rpm. 4 impellers. Weight: 460 kgs. Rating: about 25 kw with a pressure head of 70 m.

4) Capacity: 54 cu m per hour. 1,450 rpm. 6 impellers. Weight: 580 kgs. Rating: 37 kw with a pressure head of 92 m.

5) Capacity: 87 cu m per hour. 1,450 rpm. 3 impellers. Weight: 590 kgs. Rating: 29 kw with a pressure head of 50 m.

6) Capacity: 87 cu m per hour. 1,450 rpm. 5 impellers. Weight: 710 kgs. Rating: 46 kw with a pressure head of 92 m.

k. Multistage pumps with spiral off-flow from the impeller wheels (rabochoye koleso) and with balancing of the axial pressure by symmetrical impeller design as follows:

1) Type 4 NMK x 2. Capacity: 126, 150, 180 cu m per hour. 2,950 rpm. two impellers. Weight: 360 kgs. Rating and pressure head: 79-145, 93-165.

2) Type 8 NMK x 2. Capacity: 250,300, 360,430 cu m per hour. The pump with a capacity of 430 cu m per hour (120 liters per second): revolutions: 1,450 rpm; rating in kilowatts and pressure head in meters: 115-66, 135-82, 160-98, 270-165, 320-195.

l. Pumps for Gasoline and Paraffin Oil as follows:

1) Type 2 NBS. For gasoline. Capacity: 10 cu m per hour. 1,450 rpm. Rating: about 2 kw (1.4 kw) with a pressure head of 26 m. Weight: 112 kgs.

2) Type 3 NKB. For gasoline. Capacity: up to 50 cu m per hour. 1,450 rpm. Weight about 200 kgs. Rating: 6 kw with a pressure head of 20 m.

3) Type 4 NKB-3. For paraffin oil and gasoline. Capacity: from 60 to 90 cu m per hour. 1,450 rpm. Weight: 315 kgs. Rating: from 11 to 15 kw with a pressure head of about 50 m.

50X1-HUM

4) Type 4 NKB-4. For paraffin oil and gasoline. Capacity: up to 90

Declassified in Part - Sanitized Copy Approved for Release 2013/12/17 : CIA-RDP82-00457R007800540008-6

Declassified in Part - Sanitized Copy Approved for Release 2013/12/17 : CIA-RDP82-00457R007800540008-6

cu m per hour. 1,450 rpm. Weight: 450 kgs. Rating: 20 kw with a pressure head of 55 m.

m. In addition, pumps of several types are being constructed, which differ slightly from those already described. An example of those is the ZNK type bracket pump (konsolny nasos). Capacity: 126 cu m an hour (35 liters a second). Pressure head: 80 m. This pump has one impeller mounted on a bracket on the shaft.

9. Artesian pumps of several types are constructed including the following:

a. Three-stage and five-stage centrifugal artesian pumps. At the present time, artesian pumps with a capacity of 2,000 cu m per hour are being built in small series.

b. Axial type artesian pumps. Only initial experimental prototypes have been made. The shaft is enclosed in a protective pipe filled with oil.

Actual Output

10. [redacted] 50X1-HUM
The number of pumps turned out in 1947 did not exceed 5,000, and [redacted] the number in 1948 exceeded 6,000. [redacted] 50X1-HUM
in 1949 the number was about 10,000, of which more than half were 4 NDV and 8 NDV pumps, which are produced in large series.

11. Production almost doubled itself in 1949 after the reorganization of the factory, which took place between the end of 1947 and the middle of 1948. A new distribution of shops took place; the conveyer belt system was introduced into the newly formed shops for small and medium-sized pumps, and a new shop was fitted up for the manufacture of artesian pumps. Large-scale alterations took place in the foundry, and new mechanized equipment was mounted. In addition, a large quantity of new machine tools arrived in the machine shops.

Personnel

12. The number of personnel employed at the factory is about 3,000. Three shifts are worked.

13. Chief personnel includes:

a. Director: Udarev, who relieved Smirnov last year.
b. Chief Engineer: Arofikin
c. Chief Metallurgist: Ponizovski.

Shops

14. The chief shops in the factory are as follows:

a. Experimental shop
b. Small-pump shop
c. Medium-pump shop
d. Large-pump shop
e. Artesian pump shop
f. First machine shop
g. Second machine shop
h. Shop for Standardized Parts (tsekh normalei)
i. Tool shop
j. Several auxiliary shops, such as repair shop.

Customers

15. The factory furnishes machinery to the metallurgical, coal, and oil undertakings, and also municipalities and agriculture.

* [redacted] Comment: Possibly a typographical error for 360. 50X1-HUM

Declassified in Part - Sanitized Copy Approved for Release 2013/12/17 : CIA-RDP82-00457R007800540008-6